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(71) Applicants (for all designated States except US): BIOARRAY SOLUTIONS LLC [US/US]; Old Hoes Lane, Piscataway, NJ 08854 (US). RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY [US/US]; Old Queens, New Brunswick, NJ 08903 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): SEUL, Michael [DE/US]; 84 Pleasant Place, Fanwood, NJ 07023 (US). EBRIGHT, Richard, H. [US/US]; North Brunswick, NJ (US).

(74) Agents: JORAN, A., David et al.; Darby & Darby P.C., 805 Third Avenue, New York, NY 10022-7513 (US). (81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GW, HU, ID, II., IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, MIL, MR, NE, SN, TD, TG).

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(54) Title: COLOR-ENCODING AND IN-SITU INTERROGATION OF MATRIX-COUPLED CHEMICAL COMPOUNDS

(57) Abstract

A method and apparatus for the physico-chemical encoding of a collection of beaded resin ("beads") to determine the chemical identity of bead-anchored compounds by in-situ interrogation of individual beads. The present invention provides method and apparatus to implement color-coding strategies in applications and including the ultrahigh-throughput screening of bead-based combinatorial compounds libraries as well as multiplexed diagnostic and environmental testing and other biochemical assays.